

Amendments to the Claims

1. (Currently Amended) A control method of a CCD (Charge-Coupled Device) camera having at least one photographing mode, comprising: pre-storing trace data of a lens for the CCD camera;
detecting an illumination of a photographing region to be photographed with a the CCD camera;
comparing the detected illumination with a reference illumination value;
setting a photographing mode of the CCD camera on the basis of comparing the detected illumination with a reference illumination value; and
controlling a movement of a lens of the CCD camera in accordance with the set photographing mode by using corresponding pre-stored trace data of the lens.

2. (Original) The method of claim 1, wherein the photographing mode is set as a daytime mode when the detected illumination is not less than the reference illumination value.

3. (Original) The method of claim 1, wherein the photographing mode is set as a nighttime mode when the detected illumination is not greater than the reference illumination value.

4. (Currently Amended) The method of claim 1, wherein the pre-stored trace data comprises first trace data and second trace data, and the controlling process for controlling the movement of the lens further comprises the sub-steps of:

loading pre-stored first trace data in the daytime mode;
loading pre-stored second trace data in the nighttime mode; and
controlling a movement of the lens on the basis of the thusly loaded first and second trace data.

5. (Currently Amended) The method of claim 1, wherein the first trace data and the second trace data are comprise information for controlling a movement of the lens when the photographing mode is converted into the daytime mode and the nighttime mode, respectively.

6. (Currently Amended) The method of claim 5, wherein an object is photographed photographable in a visible ray region through an OLPF (Optical Low Pass Filter) in the daytime mode.

7. (Currently Amended) The method of claim 5, wherein an object is photographed photographable in an infrared ray region without passing through an OLPF (Optical Low Pass Filter) in the nighttime mode.

8. (Currently Amended) The method of claim 7, wherein the CCD camera has a lens unit comprising an optical low pass filter OLPF is included in a lens unit of the CCD camera and that is mechanically switched in or out of an optical path of the lens unit according to the a photographing mode.

9. (Currently Amended) The method of claim 1, wherein the CCD camera comprises a control unit, and further comprising:
storing the trace data is stored in a memory of the CCD camera and is loaded

loading the trace data into a the control unit of the CCD camera upon conversion of the photographing mode.

10. (Original) The method of claim 1, wherein the trace data includes values for compensating a focus error of the lens in accordance with the use or not of an OLPF (Optical Low Pass Filter) in the lens.

11. (Currently Amended) A control method of a CCD (Charge-Coupled Device) camera that has a daytime and a nighttime photographing mode, comprising:

detecting an illumination of a photographing region to be photographed by a CCD camera;

setting a photographing mode of the CCD camera to a daytime mode or a nighttime mode by judging whether the detected illumination is less or greater than a reference illumination value;

pre-storing first trace data and second trace data in a memory;

loading the first trace data pre-stored in a memory in the daytime mode;

loading the second trace data pre-stored in the memory in the nighttime mode; and

controlling a movement of a lens of the CCD camera on the basis of the first trace data and the second trace data.

12. (Currently Amended) The method of claim 11, further comprising:

wherein setting the daytime mode is set when the detected illumination is not less than the reference illumination value.

13. (Currently Amended) The method of claim 11, further comprising:

wherein ~~setting~~ the nighttime mode is set when the detected illumination is not greater than the reference illumination value.

14. (Currently Amended) The method of claim 11, further comprising:

wherein ~~photographing~~ an object is photographed in a visible ray region through an OLPF (Optical Low Pass Filter) of the lens in the daytime mode.

15. (Currently Amended) The method of claim 11, further comprising:

wherein ~~photographing~~ an object is photographed in an infrared ray region without passing through an OLPF (Optical Low Pass Filter) of the lens in the nighttime mode.

16. (Currently Amended) The method of claim 15, wherein further comprising using the first trace data and the second trace data are for compensating a focus error in accordance with the non-use or not of the OLPF.

17. (Currently Amended) The method of claim 11, wherein the first trace data and the second trace data is pre-stored in a memory as in a map format.

18. (Original) The method of claim 11, wherein the first trace data is for compensating a focus error of the lens varied through an OLPF (Optical Low Pass Filter) in the lens in the daytime mode.

19. (Currently Amended) The method of claim 18, wherein the CCD camera comprises a lens unit and an optical low pass filter OLPF is included in a the lens unit of the CCD camera and is mechanically switched switchable in and out of an optical path of the lens.

20. (Original) The method of claim 11, wherein the second trace data is for compensating a focus error of the lens varied by not passing through the OLPF in the nighttime mode.

21. (Currently Amended) A control method of a CCD (Charge-Coupled Device) camera having a lens and a nighttime mode and a daytime mode, comprising:

pre-storing first and second trace data of a lens for the CCD camera;

detecting an illumination of a photographing region to be photographed by a CCD camera;

converting a photographing mode of the CCD camera into a the daytime mode or a the nighttime mode by judging whether the detected illumination is not less or greater than a reference illumination value;

loading the first trace data for controlling a lens of the CCD camera so as to photograph the photographing region through an OLPF (Optical Low Pass Filter) when the photographing mode is converted into the daytime mode;

loading the second trace data for controlling the lens of the CCD camera

so as to photograph the photographing region without imaged light of the photographing region passing through the OLPF when the photographing mode is converted into the nighttime mode; and

adjusting a focus of the lens of the CCD camera on the basis of the loaded trace data.

22. (Currently Amended) The method of claim 21, wherein the first trace data and the second trace data are usable for compensating a focus error in accordance with the use or not of the OLPF.

23. (Currently Amended) The method of claim 21, further comprising:

wherein performing the first trace data loading process is performed in the daytime mode.

24. (Currently Amended) The method of claim 21, further comprising:

wherein performing the second trace data loading process is performed in the nighttime mode.

25. (Currently Amended) The method of claim 21, wherein the optical low pass filter OLPF is included in the camera and is mechanically switched switchable in or out of an optical path of the lens in accordance with the photographing mode.

26. (New) A CCD (Charge-Coupled Device) camera having at least one photographing mode, comprising:

means for pre-storing trace data of a lens for the CCD camera;

means for detecting an illumination of a photographing region to be photographed with the CCD camera;

means for comparing the detected illumination with a reference illumination value;

means for setting a photographing mode of the CCD camera on the basis of comparing the detected illumination with a reference illumination value; and

means for controlling a movement of a lens of the CCD camera in accordance with the set photographing mode by using corresponding pre-stored trace data of the lens.

27. (New) A CCD (Charge-Coupled Device) camera that has a daytime and a nighttime photographing mode, comprising:

means for detecting an illumination of a photographing region to be photographed by a CCD camera;

means for setting a photographing mode of the CCD camera to a daytime mode or a nighttime mode by judging whether the detected illumination is less or greater than a reference illumination value;

means for pre-storing first trace data and second trace data in a memory;

means for loading the first trace data in the daytime mode;

means for loading the second trace data in the nighttime mode; and

means for controlling a movement of a lens of the CCD camera on the basis of the first trace data and the second trace data.

28. (New) A CCD (Charge-Coupled Device) camera having a lens and a nighttime mode and a daytime mode, comprising:

means for pre-storing first and second trace data of a lens for the CCD camera;

means for detecting an illumination of a photographing region to be photographed by a CCD camera;

means for converting a photographing mode of the CCD camera into the daytime mode or the nighttime mode by judging whether the detected illumination is not less or greater than a reference illumination value;

means for loading the first trace data for controlling a lens of the CCD camera so as to photograph the photographing region through an OLPP (Optical Low Pass Filter) when the photographing mode is converted into the daytime mode;

means for loading the second trace data for controlling the lens of the CCD camera so as to photograph the photographing region without imaged light of the photographing region passing through the OLPP when the photographing mode is converted into the nighttime mode; and

means for adjusting a focus of the lens of the CCD camera on the basis of the loaded trace data.